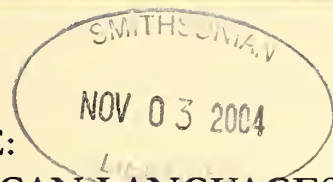


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ENDANGERED KNOWLEDGE: WHAT WE CAN LEARN FROM NATIVE AMERICAN LANGUAGES

by Ives Goddard



Altho' their Tribes or Nations border one upon another, yet you may discern as great an Alteration in their Features and Dispositions, as you can in their Speech, which generally proves quite different from each other, though their Nations be not above 10 or 20 Miles in Distance.

[John Lawson, *A New Voyage to Carolina*, 1709, p. 29]

As John Lawson traveled up the Santee, Congaree, and Catawba rivers in South Carolina and across the North Carolina Piedmont, areas that in 1701 were beyond the frontier of European settlement, he found diverse Native American peoples speaking a profusion of tongues. Most of these groups soon coalesced as the Catawba nation, in the towns of which more than twenty languages and major dialects could still be heard in 1743. Ravaged by conflicts and introduced diseases, by 1760 the remnant of these peoples was reduced to a single community. Of all the languages they had once spoken, eventually the only one that survived was Catawba, which was documented by linguistic fieldwork before the last speakers died in the 1950's. Of the others there is almost no trace.

The languages of the Carolinas can be taken as emblematic for the whole continent. The languages native to North America were and are numerous, diverse, and in most cases severely endangered. There may have been as many as 400 distinct languages spoken in North America north of the higher civilizations of Mesoamerica and their satellites in 1500. (This definition of ethnographic North America follows the one used by the Smithsonian's *Handbook of North American*

Indians.) Of these 400, it is estimated that about 70 ceased to be spoken before any documentation was made of them, except for a few isolated words and names in a few cases. An additional 125 or more have no speakers left but are known from at least some documentation, which ranges from thorough to pitiful. Only about 45 languages still have a significant number of children learning to speak them natively in family settings, most of these being spoken in Canada, Greenland, and northern Mexico.

Diversity

A measure of diversity of the languages of North America is the number of distinct language families they fall into. (A language family is a set of languages that can be shown to have developed from a common ancestral language.) The 330 or so languages for which there are at least some data belong to over sixty language families, some of which are extremely diverse in their own right. These numbers also include 28 languages with no identifiable relatives, each of which, therefore, constitutes a separate family by itself. For some languages there is simply too little information to work with. From the Aranama language of Texas we have only the single phrase *himiyána tsáyi* 'give me water' (*himiyána* being 'water'). Since these are everyday words that match no other language, Aranama must be assumed, on the available evidence, to represent a separate language family. For other languages no relatives can be found even though we have very full documentation from the last speakers, as in the case of the Tunica language of Louisiana, Tonkawa in Texas, or Haida in British Columbia and Alaska.



Although it seems likely that some of the 60-odd families are related to each other on a deeper time level than is now accessible, such relationships, while often claimed, have not yet been demonstrated to the satisfaction of specialists. It is also uncertain whether it will eventually be possible to demonstrate relationships between languages of the Western Hemisphere and those of Eurasia. The most promising possibilities would link the Eskimo-Aleut languages, spoken across the Alaskan and Canadian Arctic and in the Russian Far East, with their near neighbors west of the Bering Strait.

Bilingualism and Multilingualism

Native Americans appear to have coped with a multilingual environment mostly by learning other languages. It was apparently not uncommon in some areas for some people to know several languages other than their own. There were often war captives or foreign spouses in a community, and in some cases children were sent to live with neighboring tribes in order to learn their languages. The Five Nations of the Iroquois Confederacy spoke five languages, and a representative of any of the tribes would address council meetings in his own tongue. Clearly Iroquois leaders had to be multilingual, at least passively. In the historical period Indian guides and interpreters were used by European explorers and officials.

In some cases one particular language was used generally as a *lingua franca* by speakers of all the languages in an area, especially if there were political relationships among the groups. Creek was the common language of the polyglot components of the Creek Confederacy in Alabama and Georgia. The language of the politically and numerically dominant Tuscaroras was spoken by at least the leaders among the small tribes in eastern North Carolina. In the Lower Peninsula of Michigan, Ottawa was used also by the Ojibwas and Potawatomis. In fact, Ottawa tended to replace the other languages of the area in groups that continued to speak an Indian language. In the Upper Peninsula and Wisconsin, it was rather Ojibwa that was spoken by many bilingual Potawatomis and Menominees. On the southern Plains, Comanche was widely spoken in all tribes, while on the northern Plains the common languages were Plains Cree and Blackfoot.

In the polyglot area of the Texas Gulf Coast and the lower Rio Grande Valley, a sign language was in

use that permitted communication on a wide range of topics. This spread northward, apparently in recent centuries, and became best known as the Plains Indian sign language.

Pidgin Languages

After European contact pidgin languages came into use in several areas. These were greatly simplified versions of Indian languages that emerged from Indians' imitations of the broken attempts by Europeans to speak the local Indian language. On the East Coast, Pidgin versions of Algonquian languages came to be used from southern New England to Virginia. Some Europeans thought they were learning the real Indian language, which they denigrated for its simplicity, but others knew that the Indians would snicker among themselves at the Europeans for speaking the babytalk that the Indians had taught them.

In Louisiana and on the northern Gulf Coast, the French found Mobilian Jargon already in use when the first colonial officials arrived on Mobile Bay in 1699. This was essentially a pidgin form of Choctaw, which was spoken in eastern Mississippi. It is possible that it had grown up among the polyglot tribes of the area, but parallels with other pidgins suggest that it was more likely developed for communication with the traders and backwoodsmen who preceded the French officials into the area by a few years.

From British Columbia to Oregon, European and American sea-farers tried to communicate with Indians up and down the coast using a vocabulary of the Nootka language of Vancouver Island that had been published in the reports of Capt. James Cook's expedition as well as Nootka words from Spanish reports. This very sparse Nootka Trading Jargon was in use on the lower Columbia River when Meriwether Lewis and William Clark arrived there on their overland exploration expedition in 1805. Subsequently the Nootka Jargon was greatly expanded in the Columbia River trading centers by the accretion of words from the local Chinook language and others, including English and French. The result was Chinook Jargon, a full-blown pidgin but unusual for the number of languages it was derived from, which spread back north and over a wide area.

Loanwords

Speakers of English and other European languages often learned words from Indian languages, sometimes through the medium of local pidgins. While many of these words were not widely known and have passed out of use, many are still part of English today. From the Algonquian languages of the East Coast and the upper Great Lakes come a number of words for plant and animal life and for Indian people and culture. Among the earliest borrowings in North America were *wigwam* and *sagamore* 'chief,' which were learned by English-speakers on the coast of Maine before the first permanent settlement in Massachusetts in 1620. Other early New England words were *moose*, *skunk*, *wampum*, *papoose*, and *squaw*, the last from the Massachusetts word for 'younger woman' but now considered demeaning. *Squash* was shortened from *askútasquash*.

In Virginia, English added *persimmon*, *possum*, and *raccoon*. *Hickory* was shortened from Virginia Algonquian *pawcohiccora* 'hickory-nut milk,' and *hominy* was shortened from *Usketehamun*. A *powwow* was a shaman or religious healer in New England; the word is derived from the verb 'to dream'. Later this word was applied to a religious ceremony and then to any gathering or meeting of Indians or with Indians.

Chipmunk, earlier pronounced *chitmunk*, is from the Ojibwa word for redsquirrel. *Sasquatch* is from the Halkomelem language of British Columbia. Many fish names are of Native American origin, including *muskelunge*, *sockeye*, and *mummichog*, shortened to *mummies* in Rhode Island bait shops. The same fish is called both *scup* and *porgy*, different shortenings of Narragansett *mishcuppaûûg*.

Placenames are the most pervasive of loanwords and the most challenging. They have often been altered within English and their original form and meaning can be difficult or impossible to establish, particularly in parts of the continent like the East Coast where the local languages and their geographical vocabulary are poorly known. Many conventional explanations of Indian placenames that have become part of local lore cannot be confirmed from linguistic sources. We can be confident that *Connecticut* meant 'great river' in New England languages (where there is testimony of native speakers) and that *Mississippi* meant the same thing in the Ottawa language (since it appears in an early dictionary), but for

many names like Michigan and Milwaukee the early sources are in conflict and the origin and meaning are uncertain. The states with names that were originally those of Indian tribes are: Alabama, Arkansas, (North and South) Dakota, Illinois, Iowa, Kansas, Massachusetts, Missouri, and Utah.

Specialized Vocabulary

Within Native American languages the words used in certain subject areas often cast light on the culture. How relatives are designated varies not only in the words used but in the pattern and structure of the whole system of kinship terms. In Meskwaki, you call your first cousins 'brother' and 'sister' if the parents that link you to them are two brothers or two sisters. (Consistently with this, your father's brother and mother's sister call you 'son' or 'daughter'.) But your cousins (in the English system) that are your mother's brother's children you call 'aunt' (mother's sister) and 'uncle' (mother's brother). With your father's sister's children the roles are reversed and you call them what you would call your niece and nephew.

Kinship terminologies like the Meskwaki one are types of Omaha systems, named for the tribe that typified the pattern. They are often found in societies with strong patrilineal clans or the like. In such societies kinship terms for relatives outside the immediate family are often determined by equating people of different generations if they are in the same patrilineal lineage (consisting of a man and his children, and his son's children, and his son's son's children, and so on). So in Meskwaki a mother's brother's son is also called 'uncle', and *his* son is called 'uncle', and so on down; an old man can call a small boy his uncle if the boy is in the patrilineal lineage of his own mother's brother. Conversely, a man calls his father's sister's daughter 'niece' because that's what his father calls her. (But this man's sister calls this same first cousin 'daughter', because that's what any of her father's sisters would call her, by the rule given above that equates same-sex siblings.)

Native American languages often have highly elaborate specialized vocabularies for aspects of culture and the environment that the speakers want to be precise about. For example, Yupik Eskimo walrus hunters on Saint Lawrence Island compiled a list of 99 words that designate different kinds of sea ice. Survival on Arctic waters requires detailed knowledge of conditions.

The terminology for sea ice provides labels for ice formed in a number of different ways and with various characteristics important for both hunters and walrus, such as how dangerous it is to walk on and how well it floats.

Writing

Writing existed in Mesoamerica long before the arrival of the Spaniards, but the languages of North America were not written until after contact with Europeans. In many Native American communities writing systems were developed or acquired, and many Native American writers have written in their own languages, producing valuable cultural and linguistic documents.

In several areas Christian missionaries of various faiths devised writing systems which were then used by native speakers for secular as well as religious purposes. The first Bible to be published anywhere in the Americas was translated into the Massachusett language by John Eliot and his Indian helpers and printed in Harvard Yard in Cambridge, Massachusetts, in 1663. Using this, Massachusett speakers became literate and corresponded and kept personal and official records in their own language. The people of Mashpee on Cape Cod, for example, sent an eloquent petition written in Massachusett to the Massachusetts General Court (the colonial legislature) in 1752. The petition both used the high style of the traditional oratory of the sachems (the ruling aristocracy) and evoked a shared Christian faith to denounce the English who were encroaching on and destroying Indian resources. It ends:

*yenyen koowebquttummaunummun:
kenootamvanshinnan,
onk woh matta kooche woh nootambukoonannog ut
nuthobkenannut*

'Now we beseech you:
defend us,
and they would not trouble us any more on our
land.'

In Spanish Florida, caciques (town and district leaders) of the Apalachee and the Timucua wrote letters in their own languages to the king of Spain in 1688. In fact, the Apalachee letter preserves essentially all we know of the language. A Luisefño, named Pablo Tac, while studying for the priesthood in Rome, wrote a grammatical sketch of his language in Spanish before his death in

1841. At about the same time Iakov Netsvetov, a Russian Orthodox priest and native speaker of the Aleut language, was compiling his manuscript dictionary of it, using a special adaptation of the Cyrillic alphabet. Later that century the Cherokee medicine man Swimmer wrote out sacred formulas and medicinal prescriptions in the syllabic characters invented about 1819 by Sequoya (George Gist).

By 1880 the Meskwakis of Iowa were writing their language in an adaptation of the French alphabet devised by an unknown inventor and used also by the Potawatomi, Sauk, and Kickapoo. The Meskwakis wrote everything from tribal records to postcards in the Meskwaki language. Among those who wrote traditional stories for the Smithsonian linguist Truman Michelson in the years after 1911 was Alfred Kiyana (Keahna). Kiyana compiled thousands of pages, including also childhood reminiscences and lists of unusual words, some with definitions, all written in Meskwaki. The Winnebago (Ho-Chunk) Sam Blowsnake wrote his widely read autobiography in his own language using a writing system that had been adapted from Meskwaki to write the different sounds of the Winnebago language.

Juan Esteban Pico devised a writing system for his native Ventureño Chumash that is based on Spanish but with added features that permit the indication of significant Chumash sounds that are not found in Spanish. One of his writings that survives is a Fourth of July speech, bilingual in Ventureño and Spanish. When the Smithsonian fieldworker Henry Henshaw took linguistics



Left, Meskwaki writer Alfred Kiyana (b. 1877, d. 1918), and B.A.E. linguist Truman Michelson. Photo taken about 1912. From HNAI 17:250: figure 3.

chhechi."

Cape caa ipe y ai wakii. Ole aqui el documento
 que cal y sinapi y ai de lousa solemn que firmaron la he-
 si iah icaiy y sam aal human-raer de la independencia ame-
 wash da americana, cal auna ricana, el cual empieza con la
 nupia ia ip y ai sunwakii si sublime declaracion de que -
 "Tilach sha at, opt, apach an" Todos los hombres nacen i-
 gi eke an piasat cal y netai quales y que estan dotados por
 ca he natin ygiuawu ha di en creador con ciertos derechos
 gi him not in geyemi salmu inalienables, tales como la vi-
 alalekwaap hal gam ekenue- da, la libertad y el derecho de
 wa cape si gi nheh, ca si hu. buscar cada uno en felicidad,
 gi netpi si hu y alaknigeru, y concluir con un diamanti-
 ca si hu y unigen ish wash- into patetio dirigid a todos la
 con si hu gi ilic, ch, is hutechi pueston del mundo, declarando
 an ghuwanaat y shagachahuri los enemigos en guerra, en "az
 yilach sha aphamechmukh unigen."
 ite y shup, gip si hu shichem-
 echhechura si hu am titik, ca-
 si hu shakhe, utweshura si la
 am akhag."

Cal kotoji in wakiiu La declaracion de indepen-
 si hu am iituo an Thomas Jefferson escrita por Thomas Jef-
 ferson, ulipi ish turekpi iah jerson, contiene una lista de
 netnetishonnuuch he sa afaa dable de agravio sufrido por

A page from a text titled "Cuatro de julio de 1890" written by Juan Esteban Pico, 1891, in Ventureño Chumash. Smithsonian. NAA: ms. 3718:5.

tic notes from Pico in 1884 using the current technical phonetic alphabet, his transcriptions were much less precise than what Pico would have been able to furnish if he had been asked to write out everything himself. The Kiowa Parker McKenzie worked out an alphabet that distinguished all the complex sounds of his language, including contrastive tones, and left an extensive documentation of Kiowa at his death in 1999.

Maintenance and Revival

Today, many Native American communities have language programs to try to teach their languages to children. In many cases this involves teaching them a language that they do not learn at home. In some cases the language is no longer spoken at all and is reconstructed on the basis of linguists' descriptions, recordings, and earlier writings.

The Structure of Words

In the quotation from the Massachusetts petition given on page 4, there is a word *koowebquttummaunummun* that means 'we beseech you', the equivalent of an entire three-word English sentence contained in a single word. The prefix *koo-* and the suffix *-unummun* act together to specify

the pronouns of the sentence and their relationship: 'we' acting on 'you'. The rest of the word in the middle is the stem ('beseech'), which can take a very large number of other prefix-suffix combinations to indicate not only who is acting on whom but also numerous verbal categories, including, for example, a past tense, modes equivalent to 'if' and 'don't', and the negative 'not'. This sort of complexity gave rise to the hypothesis that Native American languages represented a distinct type of POLYSYNTHETIC language, meaning that words are put together (*synthetic*) out of many parts (*poly-*). Although we now know that not all Native American languages are of this sort, many of the language families of North America do have this characteristic, and documenting and understanding how languages like this work remains a major priority in the field of linguistics.

One of the challenges faced in documenting polysynthetic languages is that, in addition to the fact that words take large numbers of prefixes and suffixes, the word stems themselves may be complex, comprising layer upon layer of derivation and accretion. For example, starting with the Meskwaki stem *aamo-* 'run away, flee' (as in *netaamo* 'I ran away', with *net-* 'I') we can make a word as follows:

aamo- 'flee' + (prefix) *in-* '(so)' (i.e., in the manner specified by another word):

→ *inaamo-* 'flee (so), flee in such and such a way'.

inaamo- 'flee (so)' + *-b* 'cause to':

→ *inaamob-* 'cause (an animal, for example) to flee (so)'.

inaamob- 'cause (animal) to flee (so)' + *-taa* 'to or for (someone)':

→ *inaamobtaa-* 'cause (animal) to flee (so) to or for (someone)'.

inaamobtaa- 'cause (animal) to flee (so) to (someone)' + *-tii* 'each other':

→ *inaamobtaatii-* 'cause (animal) to flee (so) to each other'.

Using this five-part verb stem with the word *aayaashoohka* 'back and forth' to specify the manner of the act (for which the prefixed *in-* acts as a sort of place-holder) and adding the pre-verbal element *kiini* 'around' and the inflection *eeh-...waachi*, which indicates 'they' in narratives, produces the sentence:

aayaasboobka eeb-kiini-inaamobtaatiwaachi.

'They kept it running back and forth between them.'

(More literally, 'They made it flee around back and forth to each other.')

This sentence appears in a traditional Meskwaki story as a description of the bear hunters that rose into the sky, where they, the bear, and their little dog make up the stars of the Big Dipper.

The traditional Inuit story of Fox and Raven as recounted in an eighth-grade school reader used in Greenland contained the word:

oKausigssaerutitissasorileratdlardlune.

This is built on the noun *oKa-* 'tongue', which makes the verb *oKarpok* 'use the tongue, speak'. (The *k* of the older orthography, now written *q*, spells a far back *k* like the Arabic sound transcribed as *q*; *r* is pronounced as in French, standard German, or Danish.) This stem is suffixed as follows:

Begin with *oKa-* 'tongue, speak'.

Add *-usi* to make a verbal noun:

→ *oKausi-* 'speaking, speech, words'.

Add *-gssa* (pronounced approximately *-ghsha*) to make this future:

→ *oKausigssa-* 'future speech'.

Add *-eruti* 'have no more':

→ *oKausigssaeruti-* 'have no more future speech'.

Add *-ti* 'make, let':

→ *oKausigssaerutiti-* 'make have no more future speech', i.e., 'deprive of future speech'.

Add *-ssa*, the future suffix again (' indicates double *ss*):

→ *oKausigssaerutitissa-* 'will deprive of future speech'.

Add *-sori* 'think, suppose':

→ *oKausigssaerutitissasori-*

'to suppose that (one) will deprive (the other) of future speech'.

Add *-ler* 'begin':

→ *oKausigssaerutitissasoriler-*

'begin to suppose (one) will deprive (the other) of future speech'.

Add *-atdlar* 'for the time being':

→ *oKausigssaerutitissasorileratdlar-*

'begin to suppose, for the time being, that (one) will deprive (the other) of future speech'.

Add *-dlune*, suffixes for mood and person:

→ *oKausigssaerutitissasorileratdlardlune*

'beginning to suppose, for the time being, that he would have deprived him of future speech'.

Or more freely (but less nuanced): 'supposing, for the time being, that he had rendered him speechless'.

The Structure of Sentences

A simple English sentence is *The man found the boy*. Here *the man*, which refers to the doer (the one who does the finding), is called the subject, and *the boy*, which refers to the undergoer (the one who is found), is called the object. In English it is the order of words that differentiates this sentence from *The boy found the man*., in which the roles are reversed. Linguists have found evidence in English and other languages that the object is more closely linked to the verb than the subject is. When the sentence is analyzed into its parts, the verb and its object together form a VERB PHRASE. The object is linked to the verb, but the subject is linked to the whole verb phrase. On this hypothesis it is the different structural relations of the two nouns that determine their different roles. As we build our theory of how language works we need to incorporate the concept of verb phrase, but subject and object are not basic concepts in the same way, since these are predictable once we recognize the existence of verb phrases. By analyzing English sentences this way we are able to explain more with fewer basic concepts, which is the goal of all theory building in science.

Many polysynthetic Native American languages challenge this theory. For example, in Meskwaki one way to say 'The man found the boy' is:

neniwa mehkaweewa kwiiyeseehani.

Basically *neniwa* is 'man'; *mehkaweewa* is 'he found him'; and *kwiiyeseehani* is 'boy'. But any of the six logically possible arrangements of these three words can be used, and all six mean the same thing:

mehkaweewa kwiiyeseehani neniwa.

mehkaweewa neniwa kwiiyeseehani.

neniwa kwiiyeseehani mehkaweewa.

kwiiyeseehani mehkaweewa neniwa.

kwiiyeseehani neniwa mehkaweewa.

(The six word orders are given in descending order of frequency, as determined from a study of over 150 texts by Lucy Thomason of the Smithsonian's Department of Anthropology.)

None of these sentences can mean 'The boy found the man.' Obviously word order is not being used to distinguish subject and object, but what then does? How do Meskwaki speakers know who is the doer and who the undergoer? The key is in the inflections at the ends of the words. The endings on the nouns assign them to two different categories, which to avoid technical jargon we can call teams. The word *neniwa* 'man' ends in *-a*, which we'll say marks it as a member of the A-team; *kwiiyeseehani* 'boy' ends in *-ani*, which puts it on the B-team. These endings do not specify subject and object; that is the task of the verb ending. In this case the verb stem *mehkawi* 'find' has an ending *-eewa* that specifies an A acting on a B. (In linguistic terminology the A-team is called proximate, and the B-team is called obviative.)

The rule is that if there is an A-team noun, any other noun must be marked as being on the B-team. (Some details are omitted here.) But the speaker can decide which noun is on which "team." If the man is the hero of the tale or the focus of current interest he will be marked as on the A-team; if the boy is the one in the forefront in the narrative he will be marked as A-team and the man will have to be B-team. In this second case the three words of the sentence have different inflectional endings, and again all six mathematically possible word orders are possible:

neniwani mehkaakwa kwiiyeseeha. (And the five other word orders.)

This still means 'The man found the boy': *neniwani* is 'man (B)'; *kwiiyeseeha* is 'boy (A)'; and here the verb is *mehkaakwa* 'B found A', with a different ending to indicate 'B acting on A'. This way of saying it, however, implies that the boy is the center of the discourse, at least for the time being. Thus the sentence has something of the flavor of an English passive sentence: 'The boy was found by the man.'

In telling a story the speaker has the latitude to assign characters to the A and B teams in different ways. A battle between the Meskwaki and the Sioux may be described with the Meskwakis always in the A category and the Sioux always B. The nouns can then be largely dispensed with, since the antagonists are distinguished unambiguously by the verbal endings. Or in another style the two sides may alternate taking A-team status. This has a sort of cinematic effect, as if the camera was shifting back and forth to follow the action. The subtle and

complex use of these categories gives Meskwaki narratives a nuanced texture that is all but impossible to translate into English.

Linguists say that languages like Meskwaki have a "flat structure," meaning that there is no evidence for an abstract verb phrase (verb + object) functioning as a unit in the organization of sentences. There are other consequences of this fact. In English *The man found his son.* can mean that the man found his own son, but *His son was found by the man.* cannot have this meaning. In this case it would have to be someone else's son. In Meskwaki, however, there is no such contrast between word orders:

neniwa mehkaweewa okwisani. 'The man found his (own) son.'

okwisani mehkaweewa neniwa. 'The man found his (own) son.'

Here *okwisani* 'his son' is marked by its ending *-ani* as belonging to the B-team. With the verb ending for B acting on A, this can designate the doer:

neniwa mehkaakwa okwisani.

'The man was found by his (own) son.'

okwisani mehkaakwa neniwa.

'The man's (own) son found him.'

Regardless of whether *okwisani* 'his son' precedes or follows *neniwa* 'man' it refers to the man's son. (If it was someone else's son a more complex verb would be used.)

Principles of Organization

Some linguists cling to the belief that a structure somewhat like that postulated for English can be made to work for languages like Meskwaki on an abstract level. Other linguists argue that the absence of any evidence that would support such abstract entities as verb phrases indicates that principles of organization are operating in Meskwaki that are fundamentally different from those postulated for English. This has serious consequences for the attempt to understand the principles that operate in human language generally, since linguistic theoreticians assume that all languages share the same abstract organizational principles on some level. If there are some languages that can be demonstrated not to have a functioning verb phrase, then an abstract verb phrase is not a universal feature of all languages. If that is so, then syntactic roles like subject and object must be specified as primitive concepts in the universal abstract structure of all languages after all.

The most fundamental questions of how human language in general is organized are thus at stake in the debate over the correct analysis of Meskwaki and similar languages. And answering basic questions about how language works is likely to have consequences for our ability to understand the mechanisms of human thought, including the evolution of the brain, childhood development, learning, and cognitive function and disability. But just at the point when we are in a position to ask meaningful questions about the structure of language, the data that might lead to answers are disappearing at a precipitous rate with the loss of linguistic diversity around the world. The languages most likely to have structural patterns that challenge the theory developed on the basis of familiar languages and are among those most at risk. When these languages are gone, linguists will not be able to ask speakers for their insights into possible meanings or their acceptance of possible sentences they might want to test. Even where languages survive, they are changing rapidly in the modern world as bilingualism in dominant languages increases everywhere.

The loss of Native American languages is a cultural tragedy of almost unimaginable dimensions, but it also puts at grave risk our ability to ever understand fundamental aspects of how we as humans are organized and function. In a very real sense, we will not be able to understand how English works until we understand how Meskwaki, and Mohawk, and Navajo work, and the time for doing that is running out.

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Video: Ives Goddard presents his translation of "The Married Couple: the Man Whose Wife Was Wooed By a Bear," by Aldred Kiyana (Meskwaki). <http://www.nmnh.si.edu/departments/anthro.html/>

Ives Goddard is senior linguist in the Smithsonian's Department of Anthropology.



Ives Goddard with Adelilne Wanatee (1910-1996), Meskwaki Settlement, Tama, Iowa.

HAWAIIAN TREASURES AT THE SMITHSONIAN INSTITUTION

by Adrienne L. Kaeppler

Hawaiian Treasures, *Nā Mea Makamae O Hawai'i*, an exhibit featuring Hawaiian historic objects, photographs, and works of art, opened at the National Museum of Natural History on September 22, closing March 27, 2005. This exhibition honors Hawaiians as Native Americans and complements the September 22 opening of the National Museum of American Indian (NMAI), which does not have a collection of Hawaiian objects.

The Smithsonian Institution has been the recipient of Hawaiian materials since its inception as the National Museum of the United States in 1858. Many of these pieces came as important individual gifts, and others were collected during major exploring expeditions. The 1840 United States Exploring Expedition under Captain Charles Wilkes brought back numerous pieces of barkcloth, ornaments, stone tools, and gourd bowls. Nathaniel B. Emerson's collection for the Alaska-Yukon-Pacific Exposition, held in Seattle, Washington, in 1909, accumulated musical instruments, puppets, and many items of daily life.

Hawaiian Treasures was organized in consultation with the four Royal Societies of Hawai'i—benevolent societies that focus on Hawaiians and their identity in the modern world. This short essay focuses on three important sections of the *Hawaiian Treasures* exhibit—a canoe, featherwork, and bowls.

The Queen Kapi'olani Canoe

The centerpiece of *Hawaiian Treasures* is the 19-foot Hawaiian outrigger canoe given to the Smithsonian by Queen Kapi'olani in 1887. It is the oldest documented existing Hawaiian canoe in the world and underwent extensive conservation for this exhibition.

In May, 1887, Hawaiian Queen Kapi'olani and Princess Lili'uokalani stopped in Washington, D. C. on their way to London to attend the Jubilee of Queen Victoria of England. During their visit, the Queen and Princess met with President and Mrs. Cleveland at the White House and visited the Smithsonian's National Museum of the United States. Upon her return to Hawai'i, Queen Kapi'olani gave to the National Museum "a ca-



Kapi'olani canoe with its sail when it arrived at the Smithsonian. Photo: National Anthropological Archives.

noe similar to those in use by the Native Hawaiians many years ago." The canoe was sent via steamer ship to the Customs House in San Francisco, and arrived in Washington, via the Alaskan Commercial Company in January, 1888.

When Queen Kapi'olani sent this fishing canoe to the Smithsonian, it was already quite old. A hole at the bottom of the canoe suggests that it had hit a reef and would have been difficult to repair. The canoe has its original mat sail, but because of the sail's fragility, it is not exhibited. A wood engraving from a daguerreotype in the publication *Wide West* for 17 August 1856 illustrates a very similar canoe.

Featherwork

Feather cloaks and capes, known as '*ahu'ula* (red shoulder garments), are the most spectacular of all objects of Hawaiian manufacture. Depending on length and kinds of feathers, '*ahu'ula* were visual symbols of prestige and power.

Ahu'ula were composed of a backing of *olonā* fiber, made by a technique similar to making fishnets, and covered with natural colored feathers from a variety of forest birds. The designs, usually crescents and triangles, were created by tying small groups of feathers to the backing. The largest cloaks required some half-million feathers.

Traditionally, feather cloaks and capes were worn by male chiefs in sacred or dangerous situations, such as

warfare, when cloaks of losing chiefs were taken as battle prizes. The feather cloak of Kekuaokalani on exhibit was worn in the 1819 battle between Liholiho (Kamehameha II) and Kekuaokalani, the keeper of the war god Kūkā'ilimoku. Kekuaokalani was killed in this battle and his cloak was taken as a battle prize by Kamehameha II. The cloak was given to Commodore John H. Aulick, of the US Navy, in 1841 by Kamehameha III. The cloak has been in the Smithsonian since 1869, given by Commodore Aulick's descendants.

During the 19th century, chiefs wore feathered cloaks and capes on ceremonial occasions and for events such as funerals of other chiefs and as visual expressions of status and prestige. Cloaks and capes were made for specific individuals and it is unlikely that they would be worn by others because of the prohibition against wearing clothing that had touched the body of someone else, especially the body of a high chief. Individuals who did not respect clothing prohibitions were considered careless and were vulnerable to sorcery. Today, most featherwork is in museums for safekeeping of these treasures that are associated with Hawaiian identity and the renaissance of Hawaiian art.

King Kalākaua, Bowls, and Hale Nauā Society

David Kalākaua, of the Keawe-a-Heulu chiefly line, was elected King of Hawai'i in 1874 and quickly took on the trappings of a European monarch. 'Iolani Palace was built in Honolulu and a belated coronation, with crowns ordered from England, was held in 1883.

Following the lead of an earlier genealogical society called "Hale Nauā," Kalākaua combined earlier Hawaiian traditions with rituals derived from the Masonic Order, of which he was a member, in an effort to revitalize Hawaiian society. On ritual occasions young men wore replicas of traditional feather capes and members of the Hale Nauā kept a series of symbolic objects—including small pieces of barkcloth, a hook ornament, and a ball of twine—in specially made covered wooden bowls.

King Kalākaua was particularly interested in bowls and amassed a large collection. On his fiftieth birthday in 1886, King Kalākaua received more than 200 bowls from his admirers. These were marked with a special monogram of a crown and a forward and backward K.



Photo: Donald Hurlbert

Kekuaokalani's cloak. The exhibit also includes five feather capes.

Two of these bowls in *Hawaiian Treasures* were passed in the Prince David Kawanānanakoa line to Princess Abigail W. Kawānanakoa, who left them to the Smithsonian in her will in 1947.

Many of the exhibition objects are no longer in daily use and present-day Hawaiians marvel over the sophisticated tools and techniques employed in their fabrication. Using stone tools, animal skin, feathers, and teeth, wood and fibers from various plants, Hawaiians made intricate wood and stone sculptures, clothing, ornaments, musical instruments, bowls, and tools. Each object is treasured because of its beauty as well as its individual history and the genealogy of individuals who once owned and used it. The Smithsonian's Hawaiian objects have become treasures and are an invaluable resource for those interested in traditional knowledge and material culture. Through these treasures Hawaiians feel they are "reconnecting with their ancestors" and that Hawaiian cultural and ethnic identity are linked with museum collections.

Adrienne Kaeppler is curator of Oceanic ethnology and curator of "Hawaiian Treasures."



Photo: Donald Hurlbert

Covered bowl that belonged to King Kalākaua

ECOLOGY, CONSERVATION, AND NORTH AMERICAN INDIANS

by Shepard Krech III

In the late twentieth-century it was commonly assumed that the lives of indigenous people were traditionally more rooted in nature than the lives of people who spread from Europe across the globe. Native Americans were seen, therefore, as closer to nature in an ideological and emotional sense. Indeed, it was believed that the Indians were always a kind of “natural” people, the original ecologists and conservationists and no doubt also the first environmentalists.

But this received wisdom remained mostly unexamined until the 1990s, when it was profoundly unsettled by analyses of the historical relationship between humans and their environments, as well as by accounts of more contemporary man-land relationships. The goal here is to explore some of this more recent work pertaining to North American Indians, who serve as the archetypal Ecological Indigenous People, rivaled today only by South American tropical forest Indians.

The Ecological Indian

The image of indigenous people as the original ecologists, conservationists, and environmentalists—in North America, the Ecological Indian—is an ideal type, merely the latest in a 500-year history of imagery of indigenous people of the western hemisphere. From the moment they encountered indigenous people in the western hemisphere, Europeans classified them in order to make them sensible. They made the exotic understandable by using familiar categories, and in the process reduced men and women to stereotypes, to caricatures, noble or ignoble, benign or malignant, rational or irrational, human or cannibal.

For centuries two polar images of Indians in the New World, one noble and the other ignoble, have clashed. They are surely familiar. The Noble Indian (the Ecological Indian is an example) lived an innocent life in a golden world of nature. He was peaceful and care-free, eloquent, dignified and wise, sympathetic and intelligent. The Ignoble Indian was portrayed as bestial, savage, violent, and unintelligent (Berkhofer 1978).

Ever since Columbus wrote that he had found the Islands of the Blessed and its natural inhabitants, Europeans have crafted noble images of aboriginal people. Columbus readers were not surprised—at least not those who held to the existence of mythic places originating in pagan or Christian thought, such as the Islands of the Blessed, Arcadia, the Garden of Eden, or the Golden Age. Collectively these places expressed ideas of earthly paradise, eternal spring, or innocent life removed in space or time. These images remained potent for centuries after Columbus, especially in France, where writers coupled a critique or even a condemnation, of their own society to the contrasting image of indigenous nobility. As one historian remarked, many used the New World as a stick with which to beat the Old (Krech 1999:18).

In nineteenth-century America, this image of nobility developed further in James Fenimore Cooper's Leatherstocking books—*Last of the Mohicans* is the best known because of the film—where all manner of Indians can be found. The most famous are dignified, faultless, wise, graceful, sympathetic, and intelligent. Through Ernest Thompson Seton, the charismatic founder of the Boy Scout movement and first chief scout in America, Cooper's influence lasted beyond his time. A riveting speaker and fluid writer, Seton tried to reproduce in American youth the skills and nobility in the best of Cooper's Indians. He swayed millions in the early twentieth-century with a message emphasizing Indian skill in nature or woodcraft, which was very much in tune with the practicalities of that era's progressive conservation movement. Seton also reflected the influence of his contemporary Charles Eastman or Ohiyesa, a Sioux Indian author of best selling works, who was also active in scouting circles and on the lecture circuit.

The image of Indians as skilled in nature endured through the late 1960s and early 1970s. This period witnessed the first celebration of Earth Day; the rediscovery by environmentalists of key texts by Black Elk and Chief Seattle, although Seattle's speech had over time gone through much re-invention; and the emergence of the full-blown image of the Ecological Indian.

The Ecological Indian is the original ecologist, conservationist, and environmentalist, who possessed an intuitive, natural attitude toward the living world. His most famous representation was Keep America

Beautiful's 1971 rendering of Iron Eyes Cody, a self-ascribed Cherokee actor (he was later revealed to be of Sicilian descent), in an anti-litter advertisement. Iron Eyes was pictured with a tear tumbling down his cheek, an American Indian weeping because pollution is "a crying shame." Quickly dubbed the "Crying Indian," Iron Eyes riveted viewers with his direct gaze and soon became one of the most effective and far-reaching advertisements of all time.

The Crying Indian stands not alone but against, against the Non-Ecological White man. Weeping for history, the Crying Indian shed tears for America shattered by European settlers and their successors; for animals hunted to extinction by people of European descent; for trashed, even burning, rivers; littered and scarred landscapes; oil-slicked and tarred seas; and other environmental horrors. As an American Indian, he was free from blame, but non-Indians in his gaze were not. From that time forward, the Iron Eyes image became iconic, and American Indians as ecologists, conservationists, and environmentalists became widespread symbols for environmental attitudes and the conservation cause.

Indians as Ecologists and Conservationists

But is the fit between image and behavior a good one in North America? This question takes on added importance today in the throes of global climate change, predicted extinctions, and other environmental disasters. In recent years a great deal of research has shed light on global human-environment relations, past and present, and the antiquity of man's role in environmental change in North America and elsewhere should no longer be in doubt.

Fire

For example, human-induced fire is at least as old as our species, *Homo sapiens*, and might have evolved even earlier as one of the earliest hominid tools. Because fire transforms ecosystems, landscapes or culturally modified environments, one can argue, it is as ancient as humankind. North America was not a pristine, primeval land imagined in canvas or text when Europeans arrived, rather it was a continent (as an early-seventeenth-century Dutch mariner off the East Coast remarked) "smelt before it is seen."

In many areas, Indians torched the land. They burned to improve subsistence, to create favorable ecological niches, to drive animals from one place to another, to increase production of crops or berries and other gathered foods, to set the stage for new plant growth that would attract herbivores and, in turn, carnivores in another season.

They knew what would happen to the land and to plants and animals as a result of their burns. It was not simply that Indians possessed a formidable depth of knowledge about their environment, or that they distinguished by name literally hundreds of species of plants and animals. Rather, their use of fire revealed keen awareness of the systemic interrelationships that are at the core of the conception of an ecosystem. Indians possessed their own theories of animal behavior and made ecosystems cultural in ways that did not necessarily appear in a western conservation biologist's ecosystem. They were ecologists, but they did not always burn with ecological consequences in mind. Some used fire as an offensive or defensive weapon, driving enemies before them or covering their escape. Many lit fires to signal each other, communicating a variety of desires and plans. Others who lived in forests set them ablaze to ease travel. Many of these fires, as well as others, raged beyond control, deeply scorching the land beyond short-term utility, killing animals, and burning natural growth until extinguished by rain or halted by rivers.

Determining the precise causes and consequences of fires known archaeologically is daunting. In North America, humans caused some fires, and natural forces like lightening sparked others. Certain ecosystems are fire-succession ecosystems, in the maintenance of which human agency played a role. When Europeans gazed upon North America for the first time and many imagined an untouched Edenic wilderness, they actually were looking upon a cultural, human-modified landscape, many parts produced and maintained by fire. For instance, ponderosa pine forest requires periodic fire to eliminate competing understory, else it will launch into succession. The western scrub community known as chaparral is also fire-induced and will endure as a robust ecological community only if managed by fire (which many Indians did, to the benefit of useful plants in this community and the animals attracted to them). In the Southeast, longleaf pine forests require regular fires to remove competing

plants and destructive fungus. These pines are fire-adapted. In the absence of fire, they fail to reproduce or survive, and the forest changes to one dominated by other pines and deciduous trees. Finally, the eastern sections of the vast plains and prairies—where moisture allowed natural succession by oaks, aspens, and willows—were maintained and quite possibly induced by human fires.

Animal Extinctions

Man has been implicated in animal extinctions long before the highly publicized ones of today. One famous episode occurred at the end of the era known as the Pleistocene in North America, where the decimation of many species followed closely on the heels of the arrival of many hunting-gathering Paleoindians some 13,000-14,000 years ago. At least 35 mammalian genera disappeared, many in the millennium beginning 11,000 years ago. Many of these animals were large in size—the so called megafauna, like tusked mammoths and mastodons, slow-moving giant ground sloths, a kind of giant armadillo, one ton armored glyptodonts, single-hump camels, 300-pound beavers, hyena-like dire wolves, short-faced bears, scimitar-toothed and great saber-toothed cats, and others. Animals familiar and unfamiliar, widespread and local, and large and small vanished.

Debate is sharp over the reasons for these extinctions. One opinion cites climate change that can be linked to six other extinction episodes in the last ten million years in North America. At the end of the Pleistocene, temperatures warmed markedly and winters became colder and summers hotter. Entire habitats changed overnight. Grasses, plants, and invertebrate and vertebrate organisms flourished or died. Were the consequences dire for key herbivores with the potential to transform the environment, and, therefore, for species linked to them? Currently there are more questions than answers about the consequences of climatic and vegetational changes on specific species or about the precise mechanisms involved in the impact of climate on particular species.

Another explanation for extinction points to the Paleoindians. Unlike earlier extinctions in North America, men and women with a distinctive hunting technology and definite taste for species now extinct were present during the Pleistocene extinctions. Despite the paucity of evidence, the impact of early hunters cannot entirely

be ruled out. Perhaps climate change left some species susceptible to a Paleoindian *coup de grace*. One way to think about what happened in North America is to consider Madagascar, where, in the wake of human arrival some 1500 years ago during a long dry spell in a fluctuating climate, the extinction of birds, tortoises, hippos, lemurs, and other animals took place. This confluence of effects, one can argue, doomed more species than humans, desiccation, or vegetation changes alone could have destroyed.

It makes sense to regard preindustrial humans as efficient predators capable, under the right conditions, of depleting animal resources. For example, the people who colonized the Pacific from 1600 B.C. to A.D. 1000 induced widespread environmental change and exterminated thousands of species of birds through fire, irrigation projects, the transformation of forests into farms and grasslands, and mudflats into fishponds, as well as the introduction of new animals. By the time Europeans arrived on these islands, over one-half of endemic species were extinct in Hawaii alone, and elsewhere birds and other animals almost completely disappeared. Even on large New Zealand, Polynesian colonizers deforested vast sections of the land and hunted many species of moas—ostrich-like flightless birds—to extinction before turning their attention to the small birds, shellfish, fish, and seals that remained.



Assiniboine man on horseback driving buffalo into a corral. Smithsonian Dibner Lib.: U.S. Military Academy, West Point Coll., N.Y.: 568.

Food Production, Population Size and Density, and Village Life

From 8500 B.C. to 2500 B.C., a potent combination emerged independently in at least five different parts of the world, including Eastern North America: permanent villages occupied by more people living more densely than before, with economies based on domesticated plants and animals. This way of life, anchored in food production, spread to other parts of the globe and resulted in population densities from 10 to 100 times greater than in most foraging societies. According to some scholars, this crowding left people susceptible to diseases originating in domesticated animals and unsanitary conditions (Armstrong et al. 2004). Demography was not the only important determinant in this changing relationship between humans and the land (acquisitive intentions, resource abundance, impact of technology, and precise environmental understandings played important roles), but it was nevertheless significant. Everywhere, this new way of life contained potential for significant environmental change—in villages and especially in the most densely settled areas where urbanism emerged.

In North America, there were probably no more than 4-7 million people on the eve of European arrival (equal to the population of Colorado or Virginia in the year 2000). One can argue that no matter what people's beliefs or attitudes might have been, there were too few American Indians, too thinly spread out, to have made much of a lasting difference on lands and resources. Yet pressures could be sensed in regions like the Southwest and along the Mississippi. Here densely settled societies emerged, flourished, and (from the eleventh through the fourteenth centuries) disappeared for as yet unclear reasons. Perhaps these societies declined as a demand for wood for fuel, construction, and other purposes overtaxed the forests. Or did people fail to foresee the long-term consequences of delivering, through irrigation canals, saline waters to salt-sensitive crops planted in salty fields where the water table was high. Elsewhere in the world, canal siltation, water logging, and salinization doomed urban life despite shifting to salt-resistant grain; people denuded forests to satisfy the demand for wood, especially for domestic consumption; and domesticated animals grazed and browsed their way to defoliation and erosion. Productive strategies often left people vulnerable to unexpected events, like adverse climate change.

Reincarnation, Ethnoecology, Commodification

Whenever objects, or goods, have value in relation to other goods, they become subject to new pressures with sometimes unforeseen consequences. The most pervasive commodification is associated with the rise of capitalism in seventeenth-century Western Europe, and the global spread of Europeans affected the environmental history of all continents. In North America, Europeans arrived armed with microbes and unleashed horrific epidemic diseases, which killed many indigenous people and, in the short run, lessened pressures on ecosystems. But Europeans also turned up with an unrelenting and expansive commodification, a demand for marketable goods and primary producers, which, with increasingly capital-intensive industrial designs, ultimately proved profoundly transformative. Indigenous people responded to European appetites for goods by becoming primary suppliers of pelts and skins in exchange for a range of desired, highly valued consumer goods. The most famous commodities from the sixteenth through nineteenth centuries were white-tail deerskins and beaver pelts, willingly supplied by indigenous people to the point of the extermination of local populations of these animals; and buffalo skins, robes, and meat, supplied mainly by non-indigenous market hunters.

Might North American Indians simply have abandoned an early conservation ethic as they began to participate in Western systems of trade and commodification? If twentieth-century hunting people, who made choices maximizing their efficiency and rarely practiced restraint in harvest, provide any guide, the Indians probably acted similarly. Moreover, Indians held to certain understandings that fit awkwardly at best, or not at all, with assumptions underlying western conservation. For example, some Plains Indians made sure that animals wandering away from the base of cliffs that served as buffalo jumps did not escape. Why, if they had more than they were going to use—which they often did, given the abundant evidence of waste—would they bother to track down dazed animals wandering off? One reason apparently was the belief that as animate beings, buffaloes that escaped would warn others of the existence of the jump, which no longer would be effective. Furthermore, some Indians believed that buffaloes that had not returned as expected from their annual migration remained on the lake-bottom prairies to which they



Kiowa events from 1840-1842 as depicted in pictographs on a "winter count." Left, man covered with spots, representing the smallpox epidemic of the summer of 1840, which spread throughout the Southern Plains. Smithsonian NAA: ms. 2531, neg. 92-111444.

had gone. They would soon appear in certain cave mouths providing access between the lake-bottom and above-ground prairies. With such theories of animal behavior in a native ethology and indigenous ecology, why expect American Indians to hold to western-style conservation practice or ecological thought?

Another conceptual impasse occurred with the belief in reincarnation. Indigenous people thought that the hunt should properly be governed by culturally defined respect for animals that, rightly approached and treated in thought and deed, gave themselves up for sustenance and use. In this way, many reasoned further, animals would be reborn to be killed another day. For example, Cherokees believed that a deer hunted with respect would return again to be killed at least three and perhaps as many as six additional times. Crees imagined that if they took care not to think or speak ill of beavers, and if they respectfully placed beaver bones gently in water and followed other rules of etiquette, then beavers would willingly continue to make themselves available to be killed in potentially infinite series of reincarnations. Other Native people believed in reincarnation, including Northwest Coast Gitksan, who held that all that is required to renew salmon is to return their bones to the water. Arctic Inupiat and Inuit believed that the size of their kill and the availability of prey were unrelated and that the supply of seals, belugas, caribou, muskoxen, and other animals was unlimited. And the Yupiit also under-

stood bird and mammal populations to be infinitely renewable and unaffected directly by human predation.

It is very difficult to reconcile such beliefs or the behavior based on them with western-style conservation. It is not that respect gets in the way but that its content needs to become compatible with certain tenets of conservation biology. Indeed, at different times and places, one can see a new "rationality" coming to bear. For example, in the eighteenth- and nineteenth-century eastern Subarctic, Crees started to leave beavers in lodges to breed, and in twentieth-century Alaska, Yupiit hunters signed onto a co-management plan for geese that presumed a relationship between their kill and the goose population. As long as reincarnation remained central to the American Indian belief systems, it loomed as an obstacle to sustainable hunting practices.

Conclusions

The antiquity of environmental change should not be in dispute even with the difference in scale between ancient environmental changes, which for the most part were local or regional, and contemporary ones, which possess global potential. One conclusion specifically concerning the relationship between North American Indians and their environments stems from demography, as explained earlier: in the fifteenth-century and before, there were too few people too thinly spread out to have made a lasting difference on land and resources, lasting, that is, compared to environmental change in the twentieth century.

Another conclusion is based in culture: while ecological or systemic thought was in evidence, conservation as it came to be understood in the West was foreign and even senseless for people who believed in reincarnating prey, and, moreover, difficult to put into practice given certain ethnoecological assumptions. The story is far more complicated than simple stereotypes (the Ecological Indian) would suggest.

In recent years, the image of the Ecological Indian is alive in public culture, yet non-Indian people are quick to react when American Indians behave at odds with this image. Environmentalists approve of Indians who protect bird nesting sites, offer sanctuary to buffaloes leaving Yellowstone, refuse transport of radioactive materials across their lands, remove logging roads, or reject overtures for waste sites. These same environmen-

talists clash furiously with other Indian groups who wish to store toxic or radioactive waste, advocate construction of dams, clear-cut temperate rain forests, or waste what they kill. Some of the tensest encounters result when native people act on their perceived rights, such as the right to kill animals that may be symbolically important to all, or when the cases are especially high profile such as the controversy surrounding oil drilling in protected areas.

These political and cultural clashes might be avoided if the image of the Ecological Indian were understood as the latest in a five-hundred year lineage of noble images in the Western imagination. Indians should not be held to standards that, with rare exceptions, neither they nor others have met. Unshackled by received wisdom, environmentalists and conservationists, whether they are Indian or not, can more effectively address their goals of environmental protection and care by drawing on traditional environmental knowledge, western conservation biology, and the environmental advocacy of indigenous and non-indigenous people.

Yet often American Indians cannot afford positions staked out by environmentalists (or are not interested in them). For many in Indian Country, economic concerns trump green issues. Many Native people want jobs and disposable income. Many are interested in casinos, which provide the ultimate payoff. They do not want to sacrifice their Indian identity or sense of belonging to place. They do want power over the exploitation of natural resources within their territories, or over the use of their own environment, but there is no forecasting whether these positions will lead them toward behavior consistent with the ideology of respect for the natural world.

Prediction is difficult because of the differences in Indian Country, at almost every level, over industrial development. Not uncommon is a pro-economic development tribal leadership opposed by tribal members who consider the land's sacredness to be its most important quality or who take up environmentalist positions consistent with the image of the Ecological Indian. The most important cases today are those in which Native people press for mega-projects with profound transformational capacities: nuclear waste disposal sites, hydroelectric power, natural gas pipelines, and a liquefied natural gas (LNG) terminal. Each has its own story. The most re-

cent to emerge involves the Passamaquoddy of Sipayik (Pleasant Point) in Maine and is unfolding as I write. In the summer of 2004, the tribal leadership narrowly voted in favor of a LNG terminal, as did the tribe in a referendum, over the objections of tribal members who considered it neither traditional nor environmentally appropriate. The fate of this and other projects is undecided and at the mercy of political and global economic forces like the price of natural gas. Where they will end up is anyone's guess.

For Further Reading

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Shepard Krech III is professor of anthropology and environmental studies and director of the Haffenreffer Museum of Anthropology at Brown University.

NATIVE AMERICAN RESOURCES

*of the Department of Anthropology
National Museum of Natural History
Smithsonian Institution*

(www.nmnh.si.edu/departments/anthro.html/)

For more than 150 years, the Department of Anthropology has collaborated with Native peoples of North and South America in the study, preservation, and exhibition of their cultures. This article provides a brief overview of American Indian resources available from the Anthropology Department.

Online Exhibits

(<http://www.nmnh.si.edu/departments/anthro.html/>)

Agayuliyararput, Our Way of Making Prayer/Yu'pik Masks
Benedicte Wrensted: An Idaho Photographer in Focus
The Canela Indians of Northeastern Brazil
Crossroads of Continents: Cultures of Siberia and Alaska
Expeditions - 150 Years of Smithsonian Research in Latin America
Looking Both Ways: Heritage and Identity of the Alutiiq People of Southern Alaska
Red Cloud's Manikin and His Uncle's Shirt
Textiles of the North American Southwest
Unmasking the Maya: the Story of Sna Jtz'ibajom
Camping With the Sioux: Fieldwork Diary of Alice Cunningham Fletcher
Canela Body Adornment
Drawing the Western Frontier: The James E. Taylor Album
Henry Wood Elliott: An American Artist in Alaska
Kiowa Drawings
Selections from the Field Journal of William Duncan Strong (Honduras, 1933)
Squint Eyes: Artist & Indian Scout
Tibkematse, A Cheyenne at the Smithsonian
Mimbres Pottery

Online exhibits on collections care can be viewed at <http://www.nmnh.si.edu/departments/anthro/conservation>. Topics include Yup'ik masks, Seminole textiles, Makah cedar bark basket, and preparation of Native Alaskan artwork.

(Continued)

SOUTHEAST VOLUME OF THE HANDBOOK OF NORTH AMERICAN INDIANS IS NOW AVAILABLE



This volume, and others in the series, can be ordered for \$72 from the Superintendent of Documents (866-512-1800), <http://bookstore.gpo.gov> or from W. W. Norton (800-233-4830).

Handbook of North American Indians

This multi-volume encyclopedia summarizes knowledge about Native peoples north of Mexico, including human biology, prehistory, ethnology, linguistics, and history. For a complete list of volumes published, go online at <http://www.nmnh.si.edu/departments/anthro.html/handbook.htm>. The Southeast volume is now available.

Collections and Archives Program

The two-million Native American objects in the Anthropology Department are some of the world's finest, in terms of research quality, documentation, and state-of-the-art management and care. Web address: <http://www.nmnh.si.edu/anthro.cm/>

The collections of the National Anthropological Archives and Human Studies Film Archives include prints, digital images of artwork, photographs, as well as manuscripts, sound recordings, films, and videos. For ordering information, go to <http://www.nmnh.si.edu/naa/ordering.htm>. Web address: www.nmnh.si.edu/naa/

Anthropology Outreach Office

Distributes free information on Indian cultures including a teacher's packet. Produced an online bibliography on American Indians for K-12. Publishes *AnthroNotes*®, and produced its compendium, *Anthropology Explored* (see p. 19). Web address: <http://www.nmnh.si.edu/anthro/outreach/outreach1.html>

John Wesley Powell Anthropology Library

To view library collections and online publications, go to www.sil.si.edu/libraries/anth-hp.htm. A valuable online resource, among others, is *List of Publications of the Bureau of American Ethnology with Index to Authors and Titles* (Electronic Edition) <http://www.sil.si.edu/DigitalCollections/BAE/Bulletin200/200title.htm>. A unit of the Smithsonian Institution, the BAE was devoted to documenting the language, culture, and history of Native peoples in the Americas from 1879 to 1965. The multi-volume account of *The United States Exploring Expedition, 1838-1842* includes Native peoples in both North and South America (<http://www.sil.si.edu/DigitalCollections/usexex>). Online exhibition of the life and work of *Edward S. Curtis: Frontier Photographer* who documented Indians across North America in the early

part of the 1900s (<http://www.sil.si.edu/Exhibitions/Curtis/curtis-98-923.htm>).

American Indian Program

Encourages research in areas of interest to Native Americans. Promotes collaborative projects with Indian-controlled cultural and educational institutions. Contact: JoAllyn Archambault (202 633-1936).

Arctic Studies Center

Conducts research and produces exhibitions and public programs in North American and circumpolar regions, from its Washington and Anchorage, Alaska, regional offices. Arctic publications, a newsletter, and the monograph series, *Contributions to Circumpolar Anthropology*, are available from the ASC website (nmnh.si.edu/arctic).

Repatriation Office

This office carries out the statutory requirements of the National Museum of American Indian Act and works closely with Native people to determine the disposition of human remains and cultural objects. Web address: www.nmnh.si.edu/anthro/repatriation/

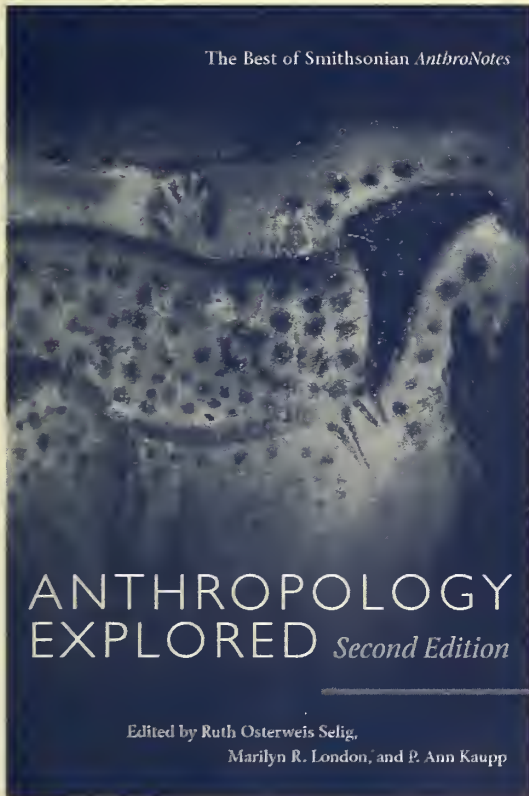
Other Anthropology research programs include: **Archaeobiology**, **Archaeometry**, **Asian Cultural History**, **Human Origins**, **Latin American Archaeology**, **Mexico-North / Mexico-Norte** (affiliated program), and **Paleo-Indian**. Departmental research also focuses on cultures in Polynesia and West Africa, as well as North America.

Fellowships and Internships

Information on fellowship and intern opportunities for Native Americans is available at (<http://web1.si.edu/ofg/fell.htm>). For undergraduate opportunities in the National Museum of Natural History, visit (http://www.mnh.si.edu/rc/under_grad_opps.html)

Upcoming special exhibits include: *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Mid-West and South* (Summer 2005); *Arctic Climate Change: A Friend Acting Strangely* (May 2005); *Alfred Métraux, From Fieldwork to Human Rights* (Fall 2005); *Lewis and Clark: The National Bicentennial Exhibition* (May 2006); *Written in Bone: Stories of Life and Death in the Colonial Chesapeake* (2007).

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2. To help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of subjects; and
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